- the keypad works in monostable mode
- the outputs activation time is 5s.
- input 1 is associated to output 1.
- input 2 is associated to output 2.
- inputs are Normally Closed
- "POWER" LED stays lit.

Jumpers significance

JP1

Opened: The transistor outputs are "open-collector" .

Closed: The transistor outputs are at 12 V. This case, the current delivered on each output cannot exceed 200-250mA.

JP2

Used to set the outputs either as relay outputs or as "open-collecor". **JP2** consists of 4 Jumpers of 2 pins each, numbered on the board as "4 3 2 1":

JP2-x (x=1, 2, 3, 4)

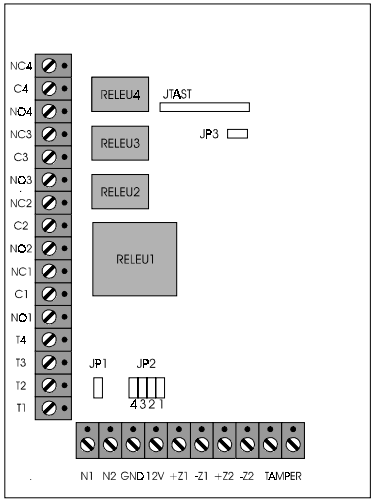
Opened: **x** output - "open-collector"

Closed: x output - relay

JP3

Used for set up to default (See set-up to default procedure).

9. CONNECTORS' SIGNIFICANCE



Pin	NO4	**relay 4**
Pin	C4	**relay 4**
Pin	NC4	**relay 4**
Pin	NO3	**relay 3**
Pin	C3	**relay 3**
Pin	NC3	**relay 3**
Pin	NO2	**relay 2**
Pin	C2	**relay 2**
Pin	NC2	**relay 2**
Pin	NO1	**relay 1**
Pin	C1	**relay 1**
Pin	NC1	**relay 1**
Pin	T4	**transistor 4 output**
Pin	T3	**transistor 3 output**
Pin	T2	**transistor 2 output**
Pin	T1	**transistor 1 output**
Pin	N1	(not used)
Pin	N2	(not used)
Pin	GND	**connected to GND**
Pin	12V	**connected to +12V DC**
Pin	+Z1	**command input 1**
Pin	-Z1	**GND**
Pin	+Z2	**command input 2**
Pin	-Z2	**GND**
TAMPER pins		to be connected to the alarm system

APENDIX

Programming options summary

**** (Master code) # 1 # (Address) # (New code) # — Modify/ Add code

**** (Master code) # 2 # (Address) # — Erase user code

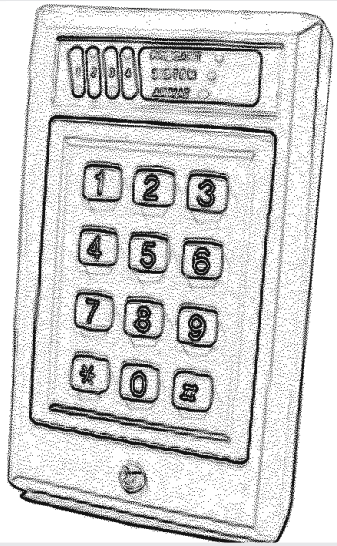
**** (Master code) # 3 # (Output No.) # (Time)# — Programming outputs' activating time

**** (Master code) # 4 # (Input No.) # (Time)# (Entry Type) # (Acivated Outputs) # — Programming inputs

**** (Master code) # 0 # — Reset users codes

USER'S MANUAL

KP 2 KEYPAD



1. FEATURES

- 60 users
- 4 independent outputs, hardware setting as "open collector" or relay outputs, software setting for trigger time.
- 2 programmable trigger inputs;
- 2 operating modes for outputs: monostable/ bistable
- Programming and operation assisted by visible and audible signals

1.1 Codes

KP2 can learn up to 60 user codes and 1 master code. All the 61 codes may be programmed. **The default master code este 000000**. Each code may have up to 1-6 digits between 0-9, and for the same code, the same digit may occur more than once. One or more outputs may be associated to acode. Thus, a code enter will activate one or more outputs.

1.2 Outputs

The keypad has 4 outputs which may be set either as relay or as "open-collector" outputs. They may work either in monostable mode or in bistable mode.

The activation time for each output is programmable. The timing may be up to 1-99 s. (in monostable mode). The value 0 means the output is in bistable mode.

1.3 Command inputs

This are two NO/NC programmable command inputs. For both, the activation time and the associated outpus may be programmed.

1.4 Programming

While in programming mode, one may set:
- 1 master code
- 60 user codes
- codes' corresponding outputs
- outputs' activation times
- operating mode (monostable / bistable)
- command inputs

2. DEFAULT PARAMETERS

Master code	**000000**.
Outputs activation time	**5 s.**
Input 1 is associated to output 1.	
Input 2 is associated to output 4.	
Inputs are set as NC.	

3. LED'S SIGNIFICANCE

LED	Position	Significance
red LED's	left	outputs state
green LED	right	keypad powered ON
red LED	right	alarm state
yellow LED	right	programming mode

The yellow LED witnesses the programming mode.

4. AUDIBLE SIGNALS SIGNIFICANCE

Signal	Significance
1 short signal	key pressed
3 short signals	valid code
2 short signals	enter into programming mode
1 long signal	invalid code

5. OPERATING MODES

5.1 Monostable mode

Upon keying in a valid code, or when a trigger input activates, the output programmed as

monostable will activate for the programmed period of time (1 - 99s). While the output is still activated, one may key in another code. Thus, the output timing will be extended to the double of the programmed period.

5.2 Bistable mode

Upon keying in a valid code, or when a trigger input activates, the output will activate and will maintain this state until a valid code is entered.

6. CODES ENTER

A code may have 1-6 digits (0-9). The code enter should always be followed by the key " **#** ". So, to enter a code do the following:

digit [digit digit digit digit digit] #

Pressing " ✱ " key while entering a code is cancelling the digit pressed previously (it is the same effect as Esc key on a PC keyboard). The entered codes may be classified as **master code** and **users codes**. The master code, comparing to the users codes, may program the keypad. The master code is always the code with the address 0 and may be modified but not erased.
A valid code entry is signalized by three short beeps. An invalid code entry is signalized by a long beep (aproximately 1s.).

NOTES

1. The default master code is 000000.
2. The master code is always the code with the address 0.
3. The master code allows the access to the programming mode.
4. All codes entries must be followed by # key.
5. Codes have 1-6 digits; into the same code the digits may repeat.

6. In case the master code is forgotten or doesn't seem to work, the keypad may be set to default (see chapter "SYSTEM SET UP TO DEFAULT").
7. 2 short beeps confirm the enter in programming mode.
8. To enter programming mode press: ****** (master code) #**
9. To exit programming mode press " ***** " .

7. PROGRAMMING

The programming menu has the following options:

1. **key 1 followed by #** **modify/add new codes**
2. **key 2 followed by #** **erase user codes**
3. **key 3 followed by #** **set outputs activating time**
4. **key 4 followed by #** **set inputs**
5. **key 0 followed by #** **reset all user codes**

In the following:
- the items to be set are in **bold** .
- the procedure is written in normal type style.
- the effect is in *italics*.

7.1 Codes programming:

YELLOW LED

1. To enter the programming menu

press **** (master code) # *blinks slowly+2 beep's*

se aºteaptã opþiunea de meniu

se iese din modul de programare tastînd *
the menu option is expected to be entered

to exit programming mode press *

2. To add codes

press 1 # *blinks fast*
codes address is expected: 0-60
to go back to step 1press *

3. Address enter

press (address) # *blinks slowly*
new code is expected to be entered
to go back to step 1press *

NOTE: If the entered address is wrong and the # key was not yet pressed, the correct address may be entered.
Upon pressing the # key, the last two entered digits will be considered.

4. Key in the new code

press (new code) # *blinks fast*
waits for for the outputs commanded by code (1, 2, 3, 4)
NOTE: If the entered code is wrong and the # key was not yet pressed, the new code may be entered subsequently.
to go back to step 1press *

5. Key in the outputs commanded by the code (1,2,3,4)

press (outputs) # *blinks slowly*
goes back to step 2

The set-up of the outputs commanded by code is seen ON-LINE.

7.2 Erasing user codes

YELLOW LED

1. To enter the programming menu

press **** (master code) # *blinks slowly+2 beep's*

the menu option is expected to be entered
to exit programming mode press *

2. Erasing codes option

press 2 # *blinks fast*
codes address is expected: 0-60
to go back to step 1press *
NOTE: the address 0 is ignored.

3. Address enter

press (address) # *blinks slowly*

goes back to previous step
NOTE: If the entered address is wrong and the # key was not yet pressed, the correct address may be entered.
Upon pressing the # key, the last two entered digits will be considered.

7.3 Programming the outputs activation time

YELLOW LED

1. **To enter the programming menu**

press **** (master code) # *blinks slowly+2 beep's*
the menu option is expected to be entered
to exit programming mode press *

2. **Outputs activation time programming enter**

press 3# *blinks slowly*
output number is expected (1-4)
to go back to step 1press *

3. Enter output number to program the activation time for

press (output no.) # *blinks fast*
time in seconds is expected (1-99)
to go back to step 1press *

4. Time enter

press (time) # *blinks slowly*
goes back to step 2

NOTE: If the entered value is wrong and the # key was not yet pressed, the correct value may be entered.
Upon pressing the # key, the last two entered digits will be considered.
The time should not always be entered as 2 digits.
Ex: to set the time for 5 s., one may press simply: 5 #.
If the activation time is set to 0, the output is set as bistable.
Any other value, different from 0, sets the output as monostable.

7.4 Command inputs programming

YELLOW LED

1. **To enter the programming menu**

press **** (master code) # *blinks slowly+2 beep's*
the menu option is expected to be entered
to exit programming mode press *

2. **To enter the inputs activation time programming**

press 3# *blinks slowly*
input number is expected (1-2)
to go back to step 1press *

3. Enter input number to program the activation time for

press (input no.) # *blinks fast*
time in seconds is expected (1-99)
to go back to step 1press *

4. Time enter

press (time) # *blinks slowly*
input type is expected (0=NC, 1=NO)
to go back to step 1press *

5. Enter input type: normally closed or normally open (0=NC 1=NO)

press (input type) # *blinks slowly*
outputs commanded by input expected (1, 2, 3, 4)
to go back to step 1press *

6. Enter outputs commanded by input (1,2,3,4)

press (outputs) # *blinks slowly*
goes back to step 2

NOTE: The time should not always be entered as 2 digits.
Ex: to set the time for 5 s., one may press simply: 5 #.
If the time is set to 0, the input is instantly activated.
The setting of the outputs commanded by the input are seen ON-LINE.

7.5 *Users codes reset*

YELLOW LED

1. To enter the programming menu

press **** (master code) # *blinks slowly+2 beep's*
the menu option is expected to be entered

to exit programming mode press *

2. Erasing codes option

press 0 # *blinks slowly*
goes back to previous step

8. SYSTEM SET UP TO DEFAULT

When the master code is forgotten or it doesn't seem to work the keypad may be set up to default as follows:

1. power off the keypad.
2. open the case .
3. short cut (close) JP3 jumper
4. power on the keypad; all the LED's will be lit.
5. press the * key, subseqently, five times.

Any other key pressed cancel the set up to default procedure.

6. open the JP3 jumper. The default values set up will be:

- master code becomes 000000